

species, mostly western, which are new determinations or new discoveries made while the work was going through the press.

Certain special features of the volume deserve mention, such as a general key to the orders and families, a glossary of special terms, a general index of Latin names with very full synonymy, and an English index including popular plant names. This last is the completest compilation of American plant names hitherto published, containing about 10,000 names, and over 12,000 references to the illustrations.

It will be remembered that the territory covered by the work extends from Newfoundland to the parallel of the southern boundary of Virginia, and from the Atlantic ocean westward to the 102d meridian, a territory extending somewhat further to the north and west than that covered by the sixth edition of Gray's *Manual*. A comparison of the number of species of spermatophytes recognized by the two is interesting, and is shown in the following table :

| | Gymnos. | Monocot | Archichlam. | Sympet. | Total |
|------------|---------|---------|-------------|---------|-------|
| Manual | 22 | 785 | 1226 | 1022 | 3055 |
| Ill. Flora | 27 | 1058 | 1601 | 1361 | 4048 |

This difference of a thousand species is explained partly by the more extensive range of the *Illustrated Flora*, but is most largely due to a different conception of species. The two works may be considered as complementary, and both are very useful.— J. M. C.

Report of Missouri Botanical Garden.

THE ninth annual report of this very active establishment was issued last March, and continues its valuable contributions, chiefly to taxonomy. Thompson's paper on Lemnaceæ has already been noticed in the GAZETTE (24: 440. 1897). The other papers are as follows :

1. GLATFELTER, N. M.: "Notes on *Salix longipes* Shuttlw. and its relations to *S. nigra* Marsh.," in which the author attempts to prove their title to be considered distinct species.

2. IRISH, H. C.: "A revision of the genus *Capsicum* with especial reference to garden varieties." This is really the completion of work undertaken by the late Dr. E. L. Sturtevant, for which he collected a great amount of material and literature, all of which with his drawings, notes, etc., were given to the Missouri Botanical Garden in 1892. The work was further prosecuted by F. W. Dewart and then by J. G. Smith, and finally, in 1896, was undertaken by Mr. Irish. The last revision of the genus was that of Dunal in 1852, in which fifty species were recognized ; and but three new species have

been described since. The *Index Kewensis* cites about ninety specific names, and recognizes fifty-four as good. Students of the genus have long suspected that most of the so-called species are but forms of a few exceedingly variable species, and Mr. Irish has reached the conclusion that there are but two species, *C. annuum* and *C. frutescens*, the one annual or biennial, the other perennial. He has preserved the well-fixed types of cultivated forms as botanical varieties. Twenty-one plates fully illustrate the paper, which is a remarkable piece of patient work in a very perplexing subject.

3. HITCHCOCK, ALBERT S.: "List of cryptogams collected in the Bahamas, Jamaica, and Grand Cayman." These collections were made the winter of 1890-1, and a list of the spermatophytes and pteridophytes was published in the fourth annual report of the Garden. The list of cryptogams contains seventy-three species, some of them new, and all determined by specialists in the several groups.

4. ROSE, J. N.: "*Agave Washingtonensis* and other agaves flowering in the Washington Botanic Garden in 1897." The large collection of agaves in the Botanic Garden at Washington has never been critically studied, and promises to contain several undescribed species, one of which Mr. Rose and J. G. Baker describe and figure in the present paper.

5. THOMPSON, CHARLES HENRY: "The species of Cacti commonly cultivated under the generic name *Anhalonium*." Mr. Thompson has done good service in supplying full notes and excellent photographs of living plants of these disputed forms. He regards the group as consisting of two genera, *Ariocarpus* Scheidw. (*Anhalonium* Lem.) and *Lophophora* Coulter.

The report closes with a series of "Notes and observations" as follows: "The *Epidendrum venosum* of Florida," by W. Trelease, with full description and two plates; "Miscellaneous observations on *Yucca*," by W. Trelease, with four plates; "The Missouri dogbanes," by W. Trelease, with two plates; "A coloring matter found in some *Borraginaceæ*," by J. B. S. Norton; "Notes on some plants chiefly from the southern United States," by J. B. S. Norton, with five plates and three new species; "A new disease of cultivated palms," by W. Trelease; and "*Parmelia molliuscula*," by Henry Willey.—J. M. C.

The flora of Africa.

THE activity, not to say rivalry, displayed by taxonomists of Belgium, England, France, and Germany in the publication of the African flora is remarkable. The book before us³ is a Belgian contribution, the first part

³DURAND, TH. et SCHINZ, HANS: *Conspectus Floræ Africae*. Vol. I, part 2. Dicotyledons (Ranunculaceæ-Frankeniaceæ). 8vo. pp. 268. Berlin: R. Friedländer and Sohn. Paris: Paul Klincksieck. fr. 12.50.